DOCUMENT RESUME

ED 276 980 CS 008 620

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TITLE Homework: What Do National Assessment Results Tell Us?

INSTITUTION National Assessment of Educational Progress, Princeton, NJ.
SPONS AGENCY Center for Statistics (OERI/ED), Washington, DC.
REPORT NO NAEP-15-R-03
PUB DATE Dec 86
GRANT NIE-G-83-0011
NOTE 17p.
AVAILABLE FROM National Assessment of Educational Progress, Educational Testing Service, Rosedale Rd., Princeton, NJ 08541.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Elementary Secondary Education; *Homework; *Reading Achievement; *Reading Assignments; *Reading Skills; *Reading Tests; *Reading Writing Relationship; Television
IDENTIFIERS *National Assessment of Educational Progress

ABSTRACT

National Assessment of Educational Progress (NAEP) data indicated a positive relationship between the amount of time spent on homework and reading achievement in grades 4, 8, and 11. This conclusion represents one segment of the findings of the 1983-84 National Assessment, which focused on reading and writing and was administered to approximately 100,000 students across 30 states. Specifically, students were asked how much time they spent on homework yesterday. Findings showed that almost two-thirds of the students reported spending time on homework, with little variance among racial/ethnic groups. This finding seemed related to more homework being assigned and reflected an increase as compared to 1980 NAEP results. Students who received homework assignments and did them tended to read at higher proficiency levels than students who did not have homework or who did not complete assigned work. Results showed that the more time students spent on homework assigned, the better they read; this relationship was clearest at grade 11. Seventy percent of the students who spent more than two hours on homework were found to watch two hours or less of television. Based on these results, NAEP recommended that: (1) students need parental support to complete assignments, (2) teachers and parents should set clear goals for homework assignments, and (3) homework policies should be consistent with other school goals. (JD)

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Homework

National Assessment of Educational Progress

The Nation's Report Card

CS 008 620

Homework:

What Do National Assessment Results Tell Us?

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December 1986

Report No. 15-R-03

The National Assessment of Educational Progress, The Nation's Report Card, is funded by the Office for Educational Research and Improvement--Center for Statistics, under a grant to Educational Testing Service. National Assessment is an education research project mandated by Congress to collect data over time on the performance of young Americans in various learning areas. It makes information on assessment procedures available to state and local education agencies.

This report, No. 15-R-03, can be ordered from the National Assessment of Educational Progress at Educational Testing Service, Rosedale Road, Princeton, New Jersey 08541-0001.

The work upon which this publication is based was performed pursuant to Grant No. NIE-G-83-0011 of the Office for Educational Research and Improvement. It does not, however, necessarily reflect the views of that agency.

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HIGHLIGHTS

Findings

- Almost two-thirds of the students reported spending time on homework.
- Some students (33 percent of fourth-graders, 22 percent of eighth- and eleventh-graders) were not assigned homework.
- Amount of homework done was positively related to reading proficiency although cause and effect are impossible to determine.

Recommendations

- Students need parental support to complete assignments.
- Clear goals for homework assignments should be set by teachers and parents.
- Homework policies should be consistent with other school goals.

INTRODUCTION

A Nation at Risk, the 1983 report of the National Commission on Excellence, made educational improvement a national policy issue. Education reform remains on the lips of policymakers, teachers, business leaders, and concerned citizens. One of the commission's recommendations centered on homework, maintaining that "students in high school should be assigned far more homework than is now the case."

How much time are students spending on homework? How much homework is being assigned? Is homework related to achievement? How do the amounts of time students spend watching television and doing homework interrelate? These are all questions that researchers have been trying to answer.

What we do know is that homework is a cherished educational tradition. Few are against it on principle--even students tend to see its inherent virtue if not too much is required and it is varied and challenging. Administrators require homework to improve test scores or grades. Parents expect their children to do homework because they believe it helps their children and encourages self-discipline. Teachers see it as a way to extend the time available for formal learning, a means to allow students to work on their own. They feel it makes a difference in achievement. Students tend to view homework as a means of improving their grades.

What is the relationship between homework and achievement? Most people would agree that the more time students spend on homework, the higher their achievement. Much of the previous research confirms this (Keith & Page, 1984). However, the homework requirements of high school curricula vary widely. Indeed, students may have been preselected for different academic tracks on the basis of achievement, so that when we examine the relationship of homework

to achievement we may merely be validating initial selection for the track assignment rather than assessing the effect of homework on achievement.

Homework also can be used to help students inculcate habits of self-control to use later in the adult working world (Etzioni, 1984). Homework that bears teachers' comments and grades has larger effects on achievement, and homework stimulates more learning than no homework (Paschal, Weinstein, & Walberg, 1983).

An analysis of data for twelfth-grade students from the High School and Beyond study showed that the number of hours spent on homework per week and the number of hours spent watching television each day are both about 4.5 (Walberg & Shanahan, 1983). Excessive television viewing may consume time that would otherwise be spent on homework (Walberg & Tsai, 1984).

The National Assessment of Educational Progress (NAEP) provides an important new source of national data on the amount of homework students do, its relationship to achievement, and the relationship of time spent watching television to time spent doing homework. NAEP is an ongoing national survey of the knowledge, skills, understandings, and attitudes of young Americans in major learning areas usually taught in school. Its primary goals are to detect and report the current status of, as well as changes in, the educational attainments of young Americans, and to report long-term trends in those attainments. Results are used by educators, legislators, and others for improving the educational experience of youth in the United States. NAEP is the first national effort to obtain comprehensive and dependable achievement data on a regular basis in a uniform, scientific manner. Funded by the Office for Educational Research and Improvement (OERI), NAEP is administered by Educational Testing Service (ETS) as an activity of its Center for the Assessment of Educational Progress (CAEP).

The focus of the 1983-84 National Assessment was reading and writing. NAEP administered the equivalent of eight assessment booklets, each containing approximately 45 minutes of achievement and background exercises, to separate samples of students at three grade levels: fourth, eighth, and eleventh. These samples were extended to allow reporting for three age groups as well: 9-, 13-, and 17-year-olds. About 1,600 public and nonpublic schools and about 100,000 students in 30 states across four regions were included in the sample.

This background paper describes one segment of the assessment results: the relationship between the amount of time spent on homework and reading achievement of students in grades 4, 8, and 11. Data from both the 1979-80 and 1983-84 NAEP samples are included for ages 13 and 17. (For convenience, the assessments will be referred to by the last half of the school year in which each occurred--1980 and 1984.)

Percentages in this report are weighted in accordance with the sample design. Reading achievement is measured by an underlying reading proficiency variable derived through the use of Item Response Theory. Results are reported using a reading proficiency scale that ranges from 0 to 500. Other results, change analyses, and writing achievement are reported elsewhere.

RESULTS FROM NATIONAL ASSESSMENT

The 1984 NAEP asked students "How much time did you spend on homework yesterday?" Response choices were: no homework was assigned, I had homework but didn't do it, less than one hour, 1-2 hours, and more than two hours. It should be noted that nine percent of the students in grade 4, 10 percent in grade 8, and one percent in grade 11 did not complete this question.

How Much Time Did Students Report Spending on Homework?

Almost two-thirds of the students reported they spent some amount of time on homework--63 percent in grade 4, 73 percent in grade 8, and 67 percent in grade 11. More eighth-grade students reported spending some amount of time doing homework than students in grades 4 and 11. Table 1 presents students' responses.

TABLE 1. Percentage of Students in Grades 4, 8, and 11 Spending Various Amounts of Time on Homework *

Grade	None Assigned	Didn't Do	Less than 1 Hour	1-2 Hours	More than 2 Hours
4	33	4	43	14	6
8	22	4	35	29	9
11	22	11	26	27	14

* Percentages may not total 100 percent due to rounding.

As grade level increased, so did the percentage of students spending longer amounts of time on homework. Six percent of fourth-grade students did more than two hours of homework, nine percent at grade 8, and 14 percent at grade 11. About one-third of the students in grade 4 reported that no homework was assigned; at grades 8 and 11, about one-fifth of the students reported that no homework was assigned.

Race/ethnicity. NAEP data show little difference in the amount of time students of different racial/ethnic groups spent doing homework. Responses from White, Black, and Hispanic students are presented in Table 2.

TABLE 2. Percentage of White, Black, and Hispanic Students Spending Various Amounts of Time on Homework *

Race/ethnicity	None Assigned	Didn't Do	Less than 1 Hour	1-2 Hours	More than 2 Hours
GRADE 4					
White	34	4	43	14	5
Black	30	5	44	13	8
Hispanic	32	5	44	13	6
GRADE 8					
White	22	4	36	30	8
Black	21	4	35	28	11
Hispanic	26	7	31	26	10
GRADE 11					
White	21	12	26	27	13
Black	21	7	26	32	13
Hispanic	27	12	22	24	14

* Percentages may not total 100 percent due to rounding.

More or Less? In the 1980 National Assessment, 13- and 17-year-old students were asked the same question about how much time they spent on homework the previous day. Responses from both assessments for students ages 13 and 17 are presented in Table 3.

TABLE 3. Percentage of Students Ages 13 and 17 Spending Various Amounts of Time on Homework Across Two Assessments *

Age	None Assigned	Didn't Do	Less than 1 Hour	1-2 Hours	More than 2 Hours	Did not Respond
13						
1980	30	6	32	24	7	< 1
1984	20	3	32	26	8	12
17						
1980	31	12	24	22	10	1
1984	22	11	26	26	13	1

* Percentages may not total 100 percent due to rounding.

By comparing data from 1980 and 1984, we find the number of students who spend some amount of time on homework has increased by three percent at age 13 and nine percent at age 17. This increase appears to be related to more homework having been assigned. In 1980, 31 percent of the 17-year-olds reported that no homework was assigned the prior day, while in 1984 the percentage dropped to 22. There appears to be a similar trend for 13-year-olds, but the nonresponse rate (12 percent) for this age group in 1984 makes it difficult to compare the two points in time.

How is the Amount of Time Spent on Homework Related to Reading Performance?

In general, students who received homework assignments and did them tended to read at higher proficiency levels than students who did not have assigned homework or who did not do their assigned homework. Table 4 presents the reading proficiency of students by the amount of time they spent on homework.

TABLE 4. Reading Proficiency of Students in Grades 4, 8, and 11 Spending Various Amounts of Time on Homework *

Grade	None Assigned	Didn't Do	Less than 1 Hour	1-2 Hours	More than 2 Hours
4	219 (1.2)	204 (2.2)	220 (0.9)	221 (1.5)	210 (2.1)
8	256 (1.1)	250 (1.5)	263 (0.7)	269 (0.8)	268 (1.4)
11	275 (1.1)	285 (1.2)	290 (0.9)	295 (0.9)	303 (1.5)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that the reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

The relationship between homework and reading proficiency is clearest at grade 11. At that level, students with no homework assigned were the poorest readers. Results from students who had some homework assigned showed that the more time they spent on homework the better they read.

At grade 8, those who were assigned homework but did not do it were the poorest readers followed by those with no homework assigned. Students who did at least some homework were better readers than those who didn't, but the pattern of increased performance with increased time spent on homework is not as clear as it is at grade 11.

At grade 4, those who were assigned homework but didn't do it were the poorest readers, followed by those who spent more than two hours doing homework. Students reporting no homework assigned and those who did up to two hours of homework were better readers than those who did not do any homework or those who did more than two hours.

How Are Homework and Television Viewing Related?

Students were asked about the amount of time they usually spend watching television. Response categories were collapsed into 0-2 hours, 3-5 hours, and 6 hours or more. (Results are reported in "Television: What Do National Assessment Results Tell Us?," Report No. 15-R-02.)

Responses to the amount of time students reported they usually watch television and the amount of time they spent on homework "yesterday" are combined in Table 5.

TABLE 5. Percentage of Students Watching Various Amounts of Television by Amount of Time Spent on Homework *

Homework	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
None assigned	29	38	33
Didn't do	25	30	45
Less than one hour	33	40	28
1-2 hours	38	36	25
More than two hours	34	31	35
GRADE 8			
None assigned	29	53	18
Didn't do	25	47	28
Less than one hour	36	51	13
1-2 hours	42	49	9
More than two hours	47	43	11
GRADE 11			
None assigned	45	45	9
Didn't do	55	36	10
Less than one hour	56	39	5
1-2 hours	62	35	4
More than two hours	70	26	4

* Percentages may not total 100 percent due to rounding.

In general, students who did a lot of homework watched less television than students who had no homework assigned or did not do their assigned homework. The pattern is most dramatic for students in grade 11. Seventy percent of the students who spent more than two hours on homework watched two hours or less of television.

Performance. The relationship between time spent doing homework and watching television and reading proficiency follows the same pattern as these factors exhibit when examined separately (Table 6). Generally, students who did some homework were better readers, and students who watched more television were poorer readers. Therefore, as expected, at grade 11 the highest performers were those who did the most homework and watched the least television.

TABLE 6. Reading Proficiency of Students Watching Various Amounts of Television by Amount of Time Spent on Homework *

Homework	0-2 Hours	3-5 Hours	6 Hours or More
GRADE 4			
None assigned	225 (1.7)	223 (1.4)	207 (1.2)
Didn't do	210 (3.3)	212 (3.4)	195 (2.7)
Less than one hour	229 (1.4)	222 (1.1)	206 (1.3)
1-2 hours	229 (2.0)	224 (2.3)	205 (2.3)
More than two hours	220 (3.4)	217 (3.4)	194 (2.2)
GRADE 8			
None assigned	261 (2.0)	258 (1.2)	244 (2.2)
Didn't do	258 (3.3)	254 (2.1)	239 (3.4)
Less than one hour	270 (1.1)	264 (0.9)	248 (1.6)
1-2 hours	275 (1.1)	268 (0.9)	251 (2.2)
More than two hours	275 (2.0)	266 (1.6)	247 (3.7)
GRADE 11			
None assigned	279 (1.4)	275 (1.4)	261 (2.4)
Didn't do	291 (1.4)	284 (1.7)	263 (3.8)
Less than one hour	296 (1.2)	286 (1.1)	276 (3.0)
1-2 hours	301 (1.0)	289 (1.2)	277 (3.2)
More than two hours	309 (1.6)	295 (1.9)	278 (5.8)

* Reading proficiency is reported using a scale that ranges from 0 to 500. Standard errors are presented in parentheses. It can be said with 95 percent certainty that they reading proficiency of the population of interest is in the interval of the estimated average $\pm$ 2 standard errors.

CONCLUSIONS

Most students reported they are spending time on homework. About two-thirds at each grade level reported doing some amount of homework. Some students -- about one-third of the fourth-graders and one-fifth of the eighth- and eleventh-graders -- did not have homework assignments.

The amount of homework that students do seems to be positively related to their reading proficiency. The NAEP data cannot show whether this is because good students are given more homework or do more homework, or because more homework leads to higher reading achievement.

Homework is not an easy issue for parents and educators to address. Parents play a varying role in homework. Students' stamina varies, especially at younger ages. Homework assignments vary by class with classes geared to less successful students requiring less outside work.

Students, parents, teachers, and administrators must determine what goals are to be met by homework assignments, which homework policies are most successful, how current practices interact with other goals, and together determine a common set of goals to be met through homework (Harvard Education Letter, 1985).

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